

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A production process for a liquid concentrate of adapted and viable bacteria, for use in foodstuffs comprising the following successive steps:

a) the bacteria are propagated in a fermenter in an appropriate culture medium;

b) the bacteria obtained in step a) are adapted;

c) the culture medium containing the bacteria adapted is washed by tangential microfiltration using a washing solution;

d) the washed medium containing the bacteria adapted is concentrated in bacteria by tangential microfiltration to a bacterial concentration greater than 5×10^{10} ~~ufe~~ /ml cfu/ml ~~advantageously greater than $1 \cdot 10^{11}$ ufe/ml~~;

e) a liquid concentrate of adapted and viable bacteria for use in foodstuffs is recovered, and

wherein adaptation of the bacteria carried out at step b) is shown by measuring parameters of the culture medium and/or bacteria parameters, and wherein the bacteria are lactic acid bacteria.

2. **(Canceled)**

3. **(Previously Presented)** The process as claimed claim 1, wherein the culture medium of step a) is a synthetic medium.

4. **(Previously Presented)** The process as claimed in claim 1, wherein the culture medium containing the bacteria in the fermenter at the end of step a) has a pH between 3 and 6.

5. **(Currently Amended)** The process as claimed in claim 1, wherein the concentration of bacteria at the end of propagation step a) is greater than 2×10^{10} ~~ufe/ml~~ cfu/ml.

6. **(Currently Amended)** The process as claimed in Claim 1, wherein the parameters of the culture medium are the pH, the osmotic pressure, ~~and/or~~ the temperature of the culture medium[[.]], or a combination thereof.

7. (Previously Presented) The process as claimed in Claim 6 wherein the parameter of the culture medium is the pH and in that the step b) is taken by reducing the pH by natural acidification.

8. (Previously Presented) The process as claimed in Claim 6, wherein the parameter of the culture medium is the temperature, and in that step b) is taken by reducing the temperature.

9. (Previously Presented) The process as claimed in claim 1, wherein the parameter of the bacteria is the size of the bacteria.

10. **(Currently Amended)** The process as claimed in Claim 1, wherein the distribution of the lengths of each bacterium is predominantly between 0.1 and 10 micrometres[[.]], ~~advantageously between 0.5 and 5 micrometres~~.

11. **(Canceled)**

12. **(Currently Amended)** The process as claim 1, wherein the tangential microfiltration membranes have a porosity between 0.01 and 0.5 μm , ~~advantageously between 0.1 and 0.3 μm~~ .

13. **(Currently Amended)** The process as claimed in claim 1, wherein in step c) the inlet pressure of the culture medium in the microfiltration module is between 0 and 3[[.]] $\times 10^5$ Pa.

14. (Previously Presented) The process as claimed in claim 1, wherein in steps c) and d) the rate of the permeate is between 0.001 and 0.1 $\text{m}^3/\text{h}/\text{m}^2$ of surface exchange.

15. **(Currently Amended)** The process as claimed in claim 1, wherein in step d) the transmembrane pressure is between 0.1[[.]] $\times 10^5$ and 2[[.]] $\times 10^5$ Pa and advantageously between 0.1[[.]] $\times 10^5$ and 0.5[[.]] $\times 10^5$ Pa.

16. **(Currently Amended)** The process as claimed in claim 1, wherein in step d) the recirculation rate of the washed medium is between 0.5 and 3 m³/h/m² of exchange surface ~~and advantageously between 0.8 and 1.25 m³/h/m² of exchange surface.~~

17. (Previously Presented) The process as claimed in claim 1, further comprising prior to step a) successive steps of revival and preculture of the bacteria.

18. (Previously Presented) The process as claimed in claim 1, further comprising an additional step f), following step e), of packaging the liquid concentrate of adapted and viable bacteria in flexible and hermetic bags.

19. (Previously Presented) The process as claimed in Claim 18 further comprising an additional step g), following step f), of keeping the liquid concentrate of adapted and viable bacteria packaged in flexible bags and hermetic at a temperature between -50°C and +4°C.

20. (Previously Presented) The process as claimed in Claim 19, further comprising an additional step h), following step g), of reheating by adapted means of the liquid concentrate of adapted and viable bacteria packaged in flexible and hermetic bags.

21-27. **(Canceled)**

28. **(Currently Amended)** A production process as claimed in claim 1, further comprising the step of adding the liquid concentrate of adapted and viable bacteria to a food product at the end of a production line ~~and preferably prior to packaging of the food product.~~

29. **(New)** A production process as claimed in claim 28, wherein said liquid concentrate is added to the food product prior to packaging of the food product.

30. **(New)** A production process as claimed in claim 1, wherein said bacterial concentration is greater than 1 x 10¹¹ cfu/ml.

31. **(New)** A production process as claimed in claim 1, wherein the bacteria are selected from Lactobacillus spp., Bifidobacterium spp., Streptococcus spp., and Lactococcus spp. genera.

32. **(New)** The process as claimed in claim 10, wherein the distribution of the lengths of each bacterium is predominantly between 0.5 and 5 micrometres.

33. **(New)** The process as claim 12, wherein the tangential microfiltration membranes have a porosity between 0.1 and 0.3 μm .

34. **(New)** The process as claimed in claim 15, wherein in step d) the transmembrane pressure is between 0.1×10^5 and 0.5×10^5 Pa.

35. **(New)** The process as claimed in claim 16, wherein in step d) the recirculation rate of the washed medium is between 0.8 and $1.25 \text{ m}^3/\text{h}/\text{m}^2$ of exchange surface.